CLAIMS

What is claimed is:

1. A curable coating composition comprising a film-forming binder and an organic liquid carrier; wherein the binder comprises:

(A) at least one curable compound having a plurality of carbamate groups;

(B) at least one alkylated melamine formaldehyde or other aminoplast crosslinking agent;

(C) at least one film-forming reactive hydroxy functional silane compound having an average of at least one hydrolyzable silyl group and a hydroxyl value of about 4 to 40.

2. The composition of claim 1, wherein component (a) is a secondary carbamate oligomer.

3. The composition of claim 1, wherein component (c) is a hydroxy-functional acrylosilane polymer.

4. The composition of claim 1, wherein component (b) is an alkylated melamine formaldehyde resin.

5. The composition of claim 1, wherein the composition includes up to 60% by weight, based on the weight of the binder, of component (a).

6. The composition of claim 1, wherein the composition includes greater than 2% by weight, based on the weight of the binder, of component (c).

7. A curable coating composition comprising about 45-90% by weight of a film-forming binder and about 10-55% by weight of an organic liquid carrier; wherein the binder contains:

(A) a curable film-forming oligomer or polymer having a plurality of secondary carbamate groups;

(B) an alkylated melamine formaldehyde or other aminoplast crosslinking agent;

(C) a curable film-forming hydroxy functional silane oligomer or polymer having a hydroxyl number of about 4 to 40 and comprising polymerized ethylenically unsaturated monomers of which about 10 to 97% by weight contain hydrolyzable silyl functionality; and

(D) optional non-aqueous dispersed polymer,

wherein the content of component (c) in the binder ranges from about 2 to about 55% by weight, based on the total weight of the binder.

8. The composition of claim 7 wherein component (c) is an acrylic polymer consisting essentially of polymerized monomers of styrene, an ethylenically unsaturated alkoxy silane monomer selected from the group consisting of acrylate, methacrylate or vinyl monomer or any mixtures thereof, a nonfunctional acrylate or methacrylate and a hydroxy alkyl acrylate or methacrylate that has 1-4 carbon atoms in the alkyl group; wherein the acrylic polymer has a weight average molecular weight of about 1,000-20,000.

9. The composition of claim 8 wherein the acrylic polymer consists essentially of polymerized monomers of styrene, gamma-methacryloxypropyl trimethoxysilane, isobutyl methacrylate, butyl acrylate, and hydroxy propyl acrylate.

10. The composition of claim 9 wherein the acrylic polymer consists essentially of polymerized monomers of about 1-30% by weight styrene, 1-96% by weight gamma-methacryloxypropyl trimethoxysilane, and 1-30% by weight isobutyl methacrylate, 1-30% by weight of butyl acrylate and about 1-9% by weight hydroxy propyl acrylate where the total percentage of monomers in the polymer equals 100%.

11. The composition of claim 7 wherein the composition further contains a moisture scavenger selected from the group consisting of trimethyl orthoacetate, triethyl orthoformate, tetrasilicate, and the like and any mixtures thereof.

12. A coating composition having a film-forming binder comprising a carbamate functional material, a melamine curing agent, and a silane functional resin with a hydrolyzable silane group, wherein the improvement is the use of a sufficient amount of hydroxy functional silane material having a hydroxyl value of about 4 to 40, to achieve recoat adhesion without destroying its primerless adhesion to windshield sealants.

13. The coating composition of claim 1, wherein said composition is a clearcoat for a basecoat/clearcoat finish.

14. The coating composition of claim 7, wherein said composition is a clearcoat for a basecoat/clearcoat finish.

15. The coating composition of claim 12, wherein said composition is a clearcoat for a basecoat/clearcoat finish.

16. A substrate coated with the dried and cured composition of claim 1.

17. An automobile or truck exterior body coated with the dried and cured composition of claim 1.

18. A process for coating a substrate, comprising:

(A) applying a layer of a pigmented basecoating to the substrate to for a basecoat thereon;

(B) applying over said basecoat, a clearcoat layer comprised of the composition of claim 1;

(C) curing the basecoat and clearcoat to for a topcoat over the substrate.